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**MAR 23 1994**

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

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**Ex-Parte**

March 23, 1994

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street  
Washington, D.C. 20554

**RE: Vogt Data Request 1600C1 in the Expanded Interconnection  
Tariff Filings, Docket 93-162**

Today, Bell Atlantic is filing its response, to the data requested in Gregory Vogt's March 14, 1994 letter, regarding further cost support in the Expanded Interconnection Tariff filings. The attached provides all the detail outlined in the above mentioned letter. Any questions regarding this request may be directed to me on 202-393-1189.

Please include this letter and the attached document as part of the record in this proceeding.

Sincerely,

*Maureen Keenan*

cc: G. Vogt  
C. Needy

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**BELL ATLANTIC**  
**DS1 and DS3 Service Overheads**  
**March 23, 1994**

Bell Atlantic submits the overhead factors and supporting information for DS1 and DS3 services as requested in the Commission's March 14, 1994 letter. This information demonstrates that collocation customers do not bear an unfair portion of overhead expenses. In fact, the originally filed overhead loading factor of 1.6845 is significantly lower than the average overhead loadings carried by standard DS1 and DS3 services.

The following assumptions were used in developing these factors:

- **Circuit Components**

Circuits consist of one channel termination, one channel mileage - fixed which recovers the termination at both ends of the interoffice channel, and the average number of channel mileage - per mile units.<sup>1</sup>

- **Determination of Average Length of a Circuit**

The average number of per mile units associated with a circuit is based on demand data included in the 1993 annual filing (Transmittal No. 565). The per mile units were divided by the

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<sup>1</sup> DS3G circuits do not include channel mileage. The DS3G electrical circuit costs/rates are based on one DS3G service arrangement and nine DS3 channels. The DS3G optical circuit is based on the original fully equipped (12 channels) rate structure. It has since been restructured to match the DS3G electrical rate structure. See Transmittal No. 583, filed July 9, 1993

fixed units to determine the average length.<sup>2</sup> The fixed units are an acceptable surrogate for the number of interoffice circuits because one fixed element is associated with every segment of channel mileage, e.g. the charges that apply to a circuit of 10 miles are one fixed rate element and 10 per mile elements and a circuit of five miles would be assessed one fixed and five per mile elements.

- **Availability of Collocation Services**

Collocation services are available in all of Bell Atlantic's jurisdictions. The collocation costs are based on a direct unit cost per jurisdiction which is weighted by the distribution of collocation central offices within the region. This results in a Bell Atlantic cost which is compared to a Bell Atlantic rate.

- **Costing Methodology for Standard and Collocated Services**

The costing methodology is explained on Attachment A. The same methodology is used to calculate the costs for standard special access services and collocation services. The Commission has required that Bell Atlantic remove the land and building loadings as well as the administration and other taxes cost components from the originally filed collocation costs. However, those costs have not been removed from standard special access services. The "circuit" cost studies

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<sup>2</sup> Month to month services and term plans were combined for DS1 and DS3/C. Only Rate Plan "D" was included in the term portion for DS3/C. The difference between the average circuit length for DS3 and DS3C was insignificant; therefore, they were combined.

are shown on Attachment B.

- **Date of Cost Studies**

The cost studies supporting the channel termination rate elements for DS1, DS3 electrical and optical, DS3C electrical and optical, and DS3G electrical were completed in February 1993. The cost studies for channel mileage - fixed for DS1, DS3, and DS3C were completed February 1993 as well.<sup>3</sup> The DS1, DS3, and DS3C channel mileage - per mile cost study was updated in October 1993 to reflect findings from the Volume and Term Inquiry. The DS3G channel termination cost study was completed in February 1992. This is the same cost study that supported the original Volume and Term Inquiry data submission (January 15, 1993). The effective date of the rates for the various services are shown on the worksheets.

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<sup>3</sup> The annual cost study update is typically completed in February.

**Recurring Cost Development**

Bell Atlantic uses direct unit costs which are economically equivalent to the average variable costs referred to in the Price Cap Order.<sup>4</sup> The following methodology is used to develop forward-looking direct unit costs:

**Investment**

Bell Atlantic performs a detailed analysis of the engineering and installation process used to provide a service in order to determine its material requirements. These material requirements include both the cost of the actual equipment and the expense associated with its installation. These requirements are expressed as "unit investments" and are listed by account. The account-specific investment information reflects the types of equipment required to provide the various services.

**Cost Factors**

The unit investments identified above are then multiplied by account-specific annual costs factors ("ACF") to calculate the direct cost components of depreciation, costs of money, income taxes, maintenance, administration, and other taxes. The application of these factors to the investments results in direct costs that will recover all of the appropriate costs of providing the service.

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<sup>4</sup> Both average variable and direct unit costs are designed to capture the costs of the "next unit."

### **Weightings**

Bell Atlantic develops all investments and direct costs on a jurisdiction-specific basis. Therefore, these individual costs must be weighted to determine the Bell Atlantic cost. The weightings are based on actual demand for the service in each jurisdiction.

*Reprinted from Volume and Term Inquiry, January 15, 1993*

**Bell Atlantic**  
**March 23, 1994**  
**Response to Vogt Letter**

**Attachment B**

**DS1 Services**

<i>Average Circuit Length</i>		
Demand, 1993 Annual Filing		
	<i>CM-Fix</i>	<i>CM-Per Mile</i>
Basic	196,219	2,225,069
2 year	145	781
3 year	74	1,187
5 year	669	8,198
Total	197,107	2,235,235
Calculation		
Per Mile / Fix		11

<i>Circuit Costs, for all DS1 services</i>	
Investment	\$6,555.44
Depreciation	\$586.60
Cost of Money	\$680.36
Income Tax	\$300.96
Maintenance	\$144.24
Administration	\$211.18
Other Tax	\$34.01
Total, Annual	\$1,957.36
Total, Monthly	\$163.11

<i>Circuit Rates, current as of March 1994</i>	
Basic	\$478.79
2 year	\$451.45
3 year	\$413.77
5 year	\$342.74

<i>Ratio of Rate to Cost</i>	
Basic	2.94
2 year	2.77
3 year	2.54
5 year	2.10

**DS3 Services**

<i>Average Circuit Length, DS3 &amp; DS3C</i>		
Demand, 1993 Annual Filing		
	<i>CM-Fix</i>	<i>CM-Per Mile</i>
DS3, m/m	276	3,591
DS3, 3 yr	194	1,809
DS3, 5 yr	1,352	18,700
DS3C, m/m	62	998
DS3C, 3 yr	31	408
DS3C, 5 yr	779	9,093
Total	2,694	34,599
Calculation		
Per Mile / Fix		13

**DS3 Electrical**

<i>Circuit Costs, DS3 Electrical</i>	
Investment	\$103,231.34
Depreciation	\$9,992.39
Cost of Money	\$9,999.24
Income Tax	\$4,453.65
Maintenance	\$2,565.45
Administration	\$3,035.60
Other Tax	\$520.30
Total, Annual	\$30,566.62
Total, Monthly	\$2,547.22

<i>Circuit Rates, current as of March 1994</i>	
DS3 "E", m/m	\$7,490.17
DS3 "E", 3 yr	\$5,746.39
DS3 "E", 5 yr	\$3,756.39

<i>Ratio of Rate to Cost</i>	
DS3 "E", m/m	2.94
DS3 "E", 3 yr	2.26
DS3 "E", 5 yr	1.47



***DS3 Services, cont.***

***DS3 Optical***

<i>Circuit Costs, DS3 Optical</i>	
Investment	\$75,781.19
Depreciation	\$6,972.57
Cost of Money	\$7,448.07
Income Tax	\$3,323.27
Maintenance	\$1,842.18
Administration	\$2,225.01
Other Tax	\$387.10
Total, Annual	\$22,198.19
Total, Monthly	\$1,849.85

<i>Circuit Rates, current as of March 1994</i>	
DS3 "O", m/m	\$7,123.14
DS3 "O", 3 yr	\$5,546.39
DS3 "O", 5 yr	\$3,406.39

<i>Ratio of Rate to Cost</i>	
DS3 "O", m/m	3.85
DS3 "O", 3 yr	3.00
DS3 "O", 5 yr	1.84

**DS3C Services**

**DS3C Electrical**

<i>Circuit Costs, DS3C Electrical</i>	
Investment	\$196,108.06
Depreciation	\$18,338.74
Cost of Money	\$19,229.39
Income Tax	\$8,559.74
Maintenance	\$4,867.94
Administration	\$5,814.83
Other Tax	\$994.61
Total, Annual	\$57,805.25
Total, Monthly	\$4,817.10

<i>Circuit Rates, current as of March 1994</i>	
DS3C "E", m/m	\$21,369.57
DS3C "E", 3 yr	\$15,039.18
DS3C "E", 5 yr	\$9,724.18

<i>Ratio of Rate to Cost</i>	
DS3C "E", m/m	4.44
DS3C "E", 3 yr	3.12
DS3C "E", 5 yr	2.02

**DS3C Optical**

<i>Circuit Costs, DS3C Optical</i>	
Investment	\$163,489.72
Depreciation	\$14,821.78
Cost of Money	\$16,161.83
Income Tax	\$7,218.38
Maintenance	\$4,004.90
Administration	\$4,826.87
Other Tax	\$832.85
Total, Annual	\$47,866.61
Total, Monthly	\$3,988.88

<i>Circuit Rates, current as of March 1994</i>	
DS3C "O", m/m	\$20,268.52
DS3C "O", 3 yr	\$14,839.18
DS3C "O", 5 yr	\$9,169.18

<i>Ratio of Rate to Cost</i>	
DS3C "O", m/m	5.08
DS3C "O", 3 yr	3.72
DS3C "O", 5 yr	2.30

**DS3G Services**

**DS3G Electrical**

<i>Circuit Costs, DS3G Electrical (equip'd w/ 9 chan.)</i>	
Investment	\$127,218.43
Depreciation	\$13,028.16
Cost of Money	\$12,209.28
Income Tax	\$5,372.52
Maintenance	\$3,363.48
Administration	\$3,940.44
Other Tax	\$647.16
Total, Annual	\$38,561.04
Total, Monthly	\$3,213.42

<i>Circuit Rates, current as of March 1994</i>	
DS3G "E", 3 yr	\$10,850.00
DS3G "E", 5 yr	\$6,750.00

<i>Ratio of Rate to Cost</i>	
DS3G "E", 3 yr	3.38
DS3G "E", 5 yr	2.10

**DS3G Optical**

<i>Circuit Costs, DS3G Optical (equip'd w/ 12 chan.)</i>	
Investment	\$74,070.98
Depreciation	\$7,369.86
Cost of Money	\$6,844.88
Income Tax	\$2,904.26
Maintenance	\$1,799.39
Administration	\$2,165.22
Other Tax	\$374.17
Total, Annual	\$21,457.78
Total, Monthly	\$1,788.15

<i>Circuit Rates, July 1993</i>	
DS3G "O", 3 yr	\$10,000.00
DS3G "O", 5 yr	\$6,000.00

<i>Ratio of Rate to Cost</i>	
DS3G "O", 3 yr	5.59
DS3G "O", 5 yr	3.36

SUMMARY OF OVERHEAD LOADINGS

<i><u>Rate Element</u></i>	<i><u>Ratio</u></i>
<i><u>DS1 Services</u></i>	
Basic	2.94
2 Year	2.77
3 Year	2.54
5 Year	2.10
<i><u>DS3 Services</u></i>	
Electrical	
Month/Month	2.94
3 Year	2.26
5 Year	1.47
Optical	
Month/Month	3.85
3 Year	3.00
5 Year	1.84
<i><u>DS3C Services</u></i>	
Electrical	
Month/Month	4.44
3 Year	3.12
5 Year	2.02
Optical	
Month/Month	5.08
3 Year	3.72
5 Year	2.30
<i><u>DS3G Services</u></i>	
Electrical	
3 Year	3.38
5 Year	2.10
Optical	
3 Year	5.59
5 Year	3.36